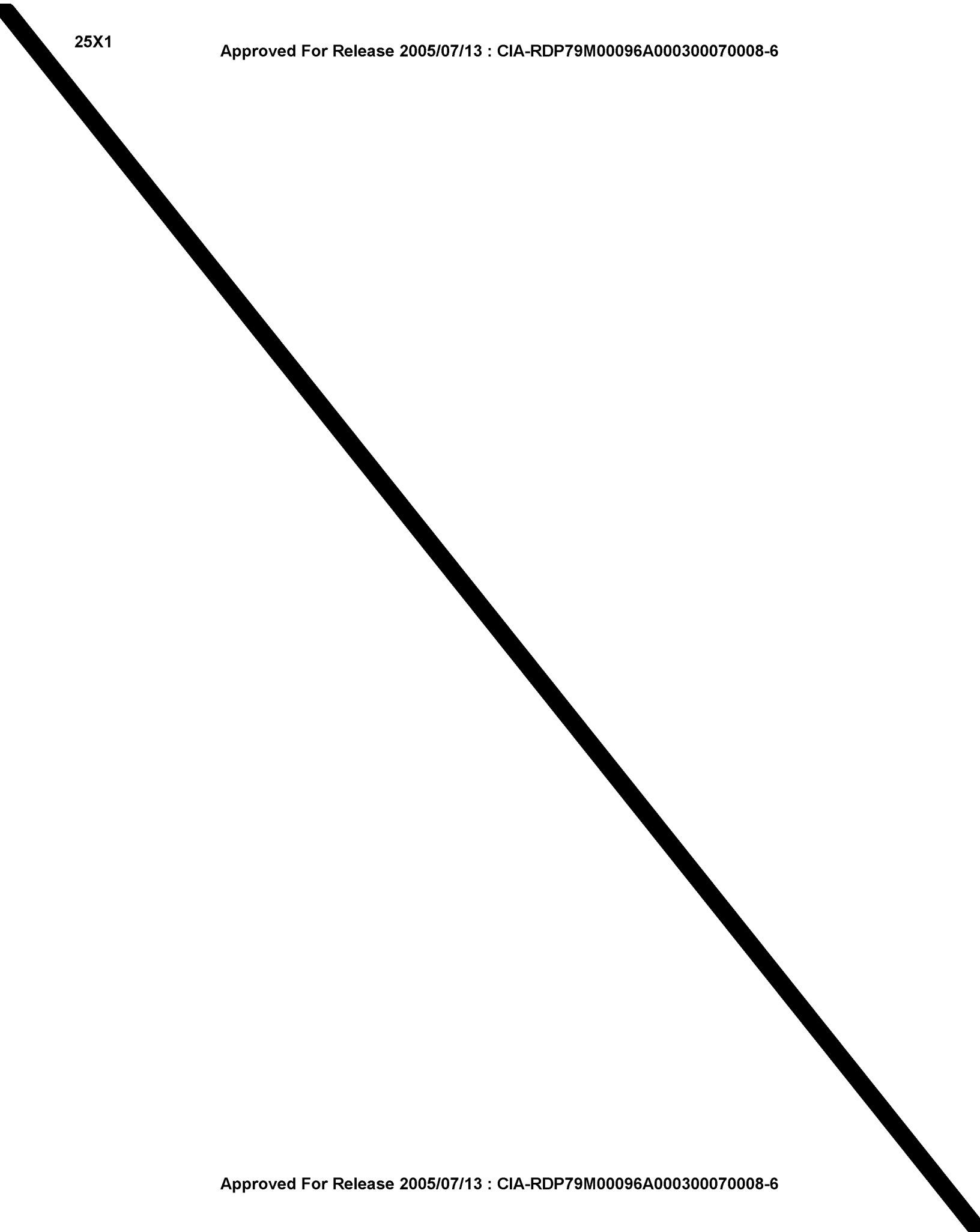

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Attachment 2

Alternate Stand-Alone COINS/CIRIS Computer Systems

One UNIVAC and two IBM systems are listed here as possibilities for a stand-alone COINS/CIRIS computer. These vendors were considered because of the relative ease with which existing COINS software could be employed.

UNIVAC 494

The configuration listed in Table 1 is required for a minimal UNIVAC 494 System which could accommodate COINS and CIRIS files and take advantage of NPIC developed software with little or no change. A program to convert files to UNIVAC 494 format would be required. (Also, software changes may be necessary to handle a newer, logically different operator console.) This system would cost about $36,000 per month. It includes only two terminals; additional terminals and variations in storage units could change the price somewhat. A configuration tailored to NSA UNIVAC 494 software has not been analyzed.

Assuming that NPIC or NSA software remains stable, in-house maintenance of software would require one systems programmer, less than full-time. Probably two computer operators would be required.

Note: the physical characteristics of some of the UNIVAC devices may present unusual installation problems (i.e., height of some devices, weight of drum).

If this computer was chosen, it would provide some degree of off-site backup for NPIC batch processing. With the addition of some peripheral devices, significant NPIC backup would be available. Its normal utility for non-COINS work at night at Headquarters would be minimal.

IBM 360/40

The configuration listed in Table 2 is required for a minimal IBM 360 System which could accommodate COINS and CIRIS files

under TSMON--the software now used for Headquarters COINS operation. This is a Model 40 System, costing about $22,000 per month. It includes five terminals and no capability to do IBM batch processing in the background, but some capability to do batch processing when COINS is off the air.

The GIMS software now being studied in OCS and the RECON software now being studied in CRS may be appropriate follow-on to the TSAR retrieval program now used in COINS. If either were adopted, TSMON and the existing COINS communications software would have to be replaced as well.

A more expensive 360/40 configuration is shown in Table 3. This provides additional core storage (384,000 bytes of core instead of 256,000), which would provide for some expansion and better batch capability. The cost of this system is about $26,000 per month.

Assuming TSMON and TSAR continued in use, software maintenance can be performed by systems programmers now in OCS or CRS. Two operators would probably be required.

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OTHER METHODS FOR HEADQUARTERS PARTICIPATION IN COINS

Group 1. Headquarters contributed COINS files on a Headquarters computer. COINS to share the computer with other applications. All day operation.

Put Headquarters contributed COINS files on

a. CRS 360/50, or
b. OCS 360/65-2, or
c. OCS 360/65-3, or
d. OCS 360/67.

Headquarters access to these and other COINS files would be through existing terminals. This computer would be connected to the DIA switch. In each case the COINS communications software would have to be modified to work with the operating system used by these computers for their other applications (3 to 9 man months). The computers are listed in order of increasing difficulty in this area. No additional equipment would be needed, although COMCET may be useful. All these computers now either process data at a security level not approved for COINS or process Agency-sensitive data. Unless there is significant reallocation of tasks, all these options contradict the assumption in paragraph 3a.

Group 2. Headquarters contributed COINS files on an Agency computer outside Headquarters. COINS to share the computer with other applications. All day operation.

Put Headquarters contributed COINS files on

a. NPIC 494, or
b. ORD 360/50.

Headquarters access to these and other COINS files by

c. existing terminals via patch panel or COMCET, to outside computer, or
d. special terminals, via data concentrator, to outside computer.

Use of the NPIC computer would require minimal modifications to software (for file conversion) and no additional hardware. Use of the ORD computer would require a software development effort similar to the Group 1 methods. Each option would require additional cryptographic equipment. Use of existing terminals would contradict the "possible data path" aspects of the assumption in paragraph 3a. The ORD computer processes Agency-sensitive data. The NPIC computer processes data at a security level not approved for COINS. In some people's view, these options would not qualify as Headquarters participation in COINS. The difficulty of satisfying the CIRIS requirement would remain.

Group 3. Headquarters contributed COINS files on a non-Agency computer. All day operation.

Put Headquarters contributed COINS files on

a. DIA computer
b. NSA computer

Headquarters access to these and other COINS files by

c. existing terminals, via patch panel or COMCET, to outside computer, or
d. special terminals, via data concentrator, to outside computer.

Only the option involving COMCET would require software development. Some file conversion programs required. Additional cryptographic equipment would be required. Use of existing terminals would contradict the "possible data path" aspects of the assumption in paragraph 3a. In some people's view, these options would not qualify as Headquarters participation in COINS. The difficulty of satisfying the CIRIS requirement would remain.

Group 4. Community files duplicated and distributed to those agencies desiring copies.

Put Headquarters contributed files on the computers in the agencies requesting them. Put copy of files maintained by and needed from other agencies on the appropriate Headquarters computers. This is the conventional procedure. Contradicts the assumption in paragraph 3b.

Group 5. Same as Group 1, but scheduled operation.

Put Headquarters contributed COINS files on the most modest IBM Headquarters computer available which could handle the COINS application. When this computer is connected to the DIA switch, Agency-sensitive files and connections to other equipment would be disabled. This is our current COINS procedure, except the loss of internal capability would be minimized.